

PAPER CONTAINER

Field Of The Invention

The present invention relates to a paper container for accommodating a number of
5 papers or the like, such as tissue papers, that are placed one upon another, being folded,
and are successively taken out.

Background

Conventionally, as a paper container for accommodating a number of papers or the
10 like, such as tissue papers, that are placed one upon another, being folded, a paper
container as disclosed in the patent documents 1, for example, has been proposed.

With the container for tissue papers as disclosed in the patent documents 1, an
opening is provided in the top wall of the container, and a plastic film is attached to the
opening portion for closing it, the film being provided with perforations for taking out a
15 tissue paper.

However, the container for tissue papers as disclosed in the patent documents 1 is
configured such that a plastic film is attached to the opening portion, thus, in
manufacturing, there is the need for preparing the plastic film, and attaching it to the
opening portion, which increases the manufacturing cost, and when the container for
20 tissue papers is to be discarded as a used one, the plastic film must be peeled from the
container for tissue papers, sorted, and discarded, from the viewpoint of the
environment protection; therefore a problem of the user being requested to make extra
work arises.

Patent Documents 1

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Having been developed in consideration of the conventional situation, the present invention eliminates the need for using a plastic film, which is used with the above-mentioned conventional container for tissue papers, and is intended to provide a paper container comprising a high-performance opening portion which offers excellent operability in taking out a paper or the like, such as a tissue paper, and yet eliminates the possibility of the user's fingers being accidentally injured in taking out a paper or the like, such as a tissue paper, in opening or unsealing the paper container, and that of the paper or the like, such as a tissue paper, being damaged when it is taken out from the paper container.

Summary Of The Invention

The paper container as claimed in Claim 1 provides a paper container comprising a container main body for accommodating a number of papers or the like, such as tissue papers, that are placed one upon another, being folded; and an opening portion for taking out said paper or the like that is formed by cutting a part of the top of the container main body, wherein

a cut constituting said opening portion is formed with a waved blade cutting tool which blade portion has a pitch of 0.1 mm to 3.0 mm.

The paper container as claimed in Claim 2 provides a paper container comprising a container main body for accommodating a number of papers or the like, such as tissue papers, that are placed one upon another, being folded; and an opening portion for taking out said paper or the like that is formed by cutting a part of the top of the container main body, wherein

a cut constituting said opening portion is formed with a waved blade cutting tool which blade portion has a pitch of 0.1 mm.

The paper container as claimed in Claim 3 provides a paper container comprising a
5 container main body in the form of a rectangular parallelepiped that accommodates a number of papers or the like, such as tissue papers, that are placed one upon another, being folded; and an opening portion for taking out said paper or the like that is formed by cutting a part of the top of the container main body, wherein

said opening portion is composed of a pair of up and down movable flaps which
10 are formed around a cut in the middle area; a pair of creases which are formed at the rear ends of the pair of up and down movable flaps, i.e., in the areas opposite to said cut in the middle area; and cuts which are formed by connecting the right and left ends of said cut in the middle area with the right and left ends of said pair of creases, and

the respective cuts constituting said opening portion is formed with a waved blade
15 cutting tool which blade portion has a pitch of 0.1 mm to 3.0 mm.

The paper container as claimed in Claim 4 provides a paper container comprising a container main body in the form of a rectangular parallelepiped that accommodates a number of papers or the like, such as tissue papers, that are placed one upon another,
20 being folded; and an opening portion for taking out said paper or the like that is formed by cutting a part of the top of the container main body, wherein

said opening portion is composed of a pair of up and down movable flaps which are formed around a cut in the middle area; a pair of creases which are formed at the rear ends of the pair of up and down movable flaps, i.e., in the areas opposite to said cut
25 in the middle area; and cuts which are formed by connecting the right and left ends of

said cut in the middle area with the right and left ends of said pair of creases, and

the respective cuts constituting said opening portion is formed with a waved blade cutting tool which blade portion has a pitch of 0.1 mm.

5 The paper container as claimed in Claim 5 provides a paper container comprising:

a container main body in the form of a rectangular parallelepiped that accommodates a number of papers or the like, such as tissue papers, that are placed one upon another, being folded; and

an opening portion for taking out said paper or the like that is formed
10 approximately rectangularly as a whole on the top of the container main body, and is comprised of a pair of up and down movable, central flaps for taking out paper or the like, and pairs of side flaps which are formed symmetrically on both sides of the up and down movable flaps, with a cut being formed by cutting between said pair of up and down movable flaps; between the respective pairs of side flaps; between the up and
15 down movable flap and the side flap; and between the side edge of the side flap and the upper face forming the top of the container main body, and a crease being formed at the respective rear ends of the pair of up and down movable flaps and the pairs of side flaps, wherein

the respective cuts constituting said opening portion are formed with a waved
20 blade cutting tool which blade portion has a pitch of 0.1 mm to 3.0 mm.

The paper container as claimed in Claim 6 provides a paper container comprising:

a container main body in the form of a rectangular parallelepiped that accommodates a number of papers or the like, such as tissue papers, that are placed one
25 upon another, being folded; and

an opening portion for taking out said paper or the like that is formed approximately rectangularly as a whole on the top of the container main body, and is comprised of a pair of up and down movable, central flaps for taking out paper or the like, and pairs of side flaps which are formed symmetrically on both sides of the up and down movable flaps, with a cut being formed by cutting between said pair of up and down movable flaps; between the respective pairs of side flaps; between the up and down movable flap and the side flap; and between the side edge of the side flap and the upper face forming the top of the container main body, and a crease being formed at the respective rear ends of the pair of up and down movable flaps, and the pairs of side flaps, wherein

the respective cuts constituting said opening portion are formed with a waved blade cutting tool which blade portion has a pitch of 0.1 mm.

According to the present invention, the respective cuts for the up and down movable flaps constituting said opening portion, and the respective cuts between the up and down movable flaps and the side flaps are provided with a waved blade geometry which has a pitch of 0.1 to 3.0 mm, preferably, 0.1 mm, thus, various high-performance paper containers can be provided which assure the operability in taking out a paper or the like, such as a tissue paper, the ability for the up and down movable flaps and the side flaps to hold a paper or the like, and the sanitation based on the covering function of the side flaps, and eliminate the possibility of the user's fingers being accidentally injured in taking out a paper or the like, such as a tissue paper, in opening or unsealing the paper container, and that of the paper or the like, such as a tissue paper, being damaged when it is taken out from the paper container.

In addition, the need for attaching a plastic film to the opening portion as with said

conventional art is eliminated, which can reduce the manufacturing cost, simplify the operation of the user in the disposal of the paper container, and yet provide a paper container which is environment-conscious.

5 Brief Description Of The Drawings

FIG. 1 is a perspective view showing the appearance of a paper container according to an embodiment of the present invention;

FIG. 2 is a partially enlarged perspective view of the paper container according to the embodiment of the present invention;

10 FIG. 3 is a schematic drawing showing a punching die for forming a cut in the paper container according to the embodiment of the present invention;

FIG. 4 is a perspective view showing a waved blade cutting tool for forming a cut in the paper container according to the embodiment of the present invention;

15 FIG. 5 is a sectional view showing the condition before starting the use of the paper container according to the embodiment of the present invention;

FIG. 6 is a sectional view showing the condition at the start of the use of the paper container according to the embodiment of the present invention;

20 FIG. 7 is a sectional view showing the condition when a paper or the like is being taken out from the paper container according to the embodiment of the present invention;

FIG. 8 is a perspective view showing the condition when the paper or the like is being taken out from the paper container according to the embodiment of the present invention; and

25 FIG. 9 is a sectional view showing the condition after the first paper or the like has been taken out from the paper container according to the embodiment of the present

invention.

Description Of The Preferred Embodiment

Here is a description of an embodiment of the present invention, but the present
5 invention is not limited to that.

FIG. 1 is a perspective view showing the appearance of a paper container 1 according to one embodiment of the present invention, and the paper container 1 comprises a container main body 2 in the form of a rectangular parallelepiped that can accommodate a number of papers or the like P (see FIG. 5), such as tissue papers, that
10 are placed one upon another, being folded; and an opening portion 10 for taking out said paper or the like P that is formed approximately rectangularly as a whole on the top of the container main body 2, and is comprised of a pair of up and down movable, central flaps 3a, 3b for taking out paper or the like P, and pairs of side flaps 4a, 4b, 4c, 4d which are formed symmetrically on both sides of the up and down movable flaps 3a, 3b.

15 As shown in FIG. 2, being enlarged, said opening portion 10 is configured by forming a cut 5 by cutting between said pair of up and down movable flaps 3a, 3b; between the respective pairs of side flaps 4a, 4b, 4c, 4d; between the up and down movable flap 3a, 3b and the side flap 4a, 4b, 4c, 4d; and further between the side edge of the side flap 4a, 4b, the side flap 4c, 4d, and the upper face 2a forming the top of the
20 container main body 2, and a crease 6 as shown with a dotted line at the respective rear ends of the pair of up and down movable flaps 3a, 3b and the pairs of side flaps 4a, 4b, 4c, 4d.

As shown in FIG. 3 and FIG. 4, the respective cuts 5 which constitute said opening portion 10 are created through a cutting process with forming dies that involves
25 mounting a waved blade cutting tool 12 which blade portion 11 has a pitch of 0.1 to 3.0

mm, preferably, 0.1 mm, to an upper die 13; loading the paper container 1 before assembling on a lower die 14; and dropping the upper die 13 toward the lower die 14.

As a result of this, said respective cuts 5 are provided with a minute blade geometry which has a pitch of 0.1 to 3.0 mm, preferably, 0.1 mm, corresponding to the
5 blade portion 11 of the waved blade cutting tool 12.

The reasons why said respective cuts 5 are provided with a minute blade geometry which has a pitch of 0.1 to 3.0 mm, preferably, 0.1 mm are the necessity of assuring ease of opening; preventing the fingers from being injured in taking out a paper or the like P by operating the fingers; providing a sufficient capability of holding the paper or
10 the like P; and avoiding the taken out paper or the like P from being damaged when being contacted and engaged with the cut.

In other words, if said cuts 5 are provided with a minute blade geometry which has a pitch of under 0.1 mm, the capability of holding the paper or the like P for preventing it from being dropped will be insufficient, and contrarily, if the pitch exceeds 3.0 mm,
15 the degree of engagement of the cut with the taken out paper or the like P and the resulting damage thereto will be too high.

Said creases 6 are formed by perforation, cutting with a reed, waved, or straight blade, scoring, or the like.

With the present invention, as a modification of the paper container 1 according to
20 the embodiment as shown in said FIG. 1 and the like, the paper container 1 may be composed of a container body 2, and an opening portion 10 for taking out said paper or the like P that is formed on the top of the container body 2, and the opening portion 10 may be composed of a pair of up and down movable flaps 3a, 3b which are formed around a cut 5 in the middle area; a pair of creases 6, 6 which are formed at the rear
25 ends of the pair of up and down movable flaps 3a, 3b, i.e., in the areas opposite to said

cut 5 in the middle area; and cuts 5, 5 which are formed by connecting the right and left ends of said cut 5 in the middle area with the right and left ends of said pair of creases 6, 6, the cuts constituting said opening portion 10 being formed by using a waved blade cutting tool which blade portion has a pitch in the range of 0.1 mm to 3.0 mm, preferably, 0.1 mm.

Next, with reference to FIG. 5 to FIG. 9, the function of the paper container 1 according to the one embodiment of the present invention will be described.

Before the start of use of the paper container 1 according to the present embodiment, the pair of up and down movable, central flaps 3a, 3b for taking out paper or the like P, and the pairs of side flaps 4a, 4b, and side flaps 4c, 4d are flat on the top of the container main body 2.

In order to take out a paper or the like P from the inside of the container main body 2, the user presses down the up and down movable flaps 3a, 3b by two fingers as shown in FIG. 6. By doing this, the up and down movable flaps 3a, 3b are folded down at the creases 6, and the top layer of paper or the like P is exposed, then the user can pinch the first paper or the like P by two fingers, for example, and take it upward from the container main body 2.

FIG. 7 and FIG. 8 show that the first paper or the like P, such as a tissue paper, is being taken out upward from the container main body 2.

When a paper or the like P is taken out upward, the up and down movable flaps 3a, 3b which are once folded down are inverted as the paper or the like P is moved upward, and folded up at the crease 6, being supported thereby, with the opposed cuts 5 contacting both surfaces of the first paper or the like P.

In this case, the pairs of side flaps 4a, 4b, and side flaps 4c, 4d are also folded up, and the opposed cuts 5 for these side flaps 4a, 4b and side flaps 4c, 4d are contacted

with both surfaces of the first paper or the like P.

In thus taking the first paper or the like P upward from the container main body 2, the second paper or the like P, which is folded in conjunction with the first paper or the like P, is successively pulled upward, being interlocked with the first paper or the like P
5 (this statement is also applicable to the third and subsequent papers or the like P).

Once the first paper or the like P is completely taken out from the container main body 2, as shown in FIG. 9, the leading edge of the second paper or the like P is exposed in the opening portion 10 in the container main body 2, with the opposed cuts 5 for the up and down movable flaps 3a, 3b, the side flaps 4a, 4b, and , the side flaps 4c,
10 4d being contacted with both surfaces of the second paper or the like P, respectively.

In other words, the up and down movable flaps 3a, 3b, the side flaps 4a, 4b, and , the side flaps 4c, 4d function not only as paper holders to prevent the paper or the like P from being dropped, but also as covers to prevent dirt and dust, insects and the like from entering the inside of the container main body 2.

15 Such functions of the up and down movable flaps 3a, 3b, the side flaps 4a, 4b, and , the side flaps 4c, 4d are maintained until the papers or the like P which are placed one upon another, being folded, in the container main body 2 are used one after another and finally used up.

With the paper container 1 according to the present embodiment, the respective
20 cuts 5 for the up and down movable flaps 3a, 3b, and the side flaps 4a, 4b, 4c, 4d in said opening portion 10 are provided with a blade geometry which has a pitch of 0.1 mm to 3.0 mm, preferably, 0.1 mm, thus, various high-performance paper containers can be provided which assure excellent operability in taking out a paper or the like P, such as a tissue paper, holdability for paper or the like, and sanitation, and yet eliminate the
25 possibility of the user's fingers being accidentally injured in taking out a paper or the

like, such as a tissue paper, in opening or unsealing the paper container 1, and that of the paper or the like, such as a tissue paper, being damaged when it is taken out from the paper container 1.

5 In addition, with the paper container 1 according to the present embodiment, the need for attaching a plastic film to the opening portion as with said conventional art is eliminated, which can reduce the manufacturing cost, and simplify the operation of the user in disposal of the paper container 1, and yet a paper container which is environment-conscious can be provided.

10 The paper container 1 according to the present embodiment can be applied not only as a container for tissue papers, but also as that for various thin papers for packaging foods and the like.

According to the present invention as described above in detail, a high-performance paper container can be provided which can lower the manufacturing cost, assure operability in taking out a paper or the like, such as a tissue paper, 15 holdability for paper or the like, and sanitation, and yet eliminate the possibility of the user's fingers being accidentally injured and that of the paper or the like being damaged.